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Reply to [Letter to the Editor](#): the proper blood pressure may impair cardiovascular risk factors

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We are very delighted about the international interest in our paper “Uncontrolled arterial hypertension in primary care – patient characteristics and associated factors” ([Swiss Med Wkly. 2012;142:w13693](#)). We are especially delighted that our work obviously is not only recognised by primary care physicians, but also by specialists as the letter to the editor by Sait Demirkol [1] reflects.

We are also thankful for the comment regarding the cross sectional design of our study. We agree with Demirkol and colleagues that a cross sectional design can only show correlations but not prove any causality. This would only be possible – as suggested by Demirkol et al. – by a follow up. The data presented in our paper are derived from the baseline-assessment of the CoCo trial, a randomised, controlled trial aiming at improving blood pressure control by using a colour coded booklet for patients to note their blood pressure measurements (Trials. 14 April 2010;11:38).

It is our aim to follow the patients included in CoCo for at least one year. Therefore, we will be able – controlled for the intervention – to analyse the influence of the detected risk factors for elevated blood pressure, namely age, smoking and a high body mass index over time. We are looking forward to present these data soon.

We agree with Demirkol and colleagues that patients with established cardiovascular diseases have a dysregulation of vascular tone thus further promoting atherosclerosis. As a consequence, blood pressure control by pharmacological agents might differ depending on pleiotropic effects of these agents beyond blood pressure lowering, including anti-oxidative and anti-inflammatory actions (Curr Vasc Pharmacol. 2011 Mar;9(2):145–52, Clin Exp Hypertens. 2012 Nov 30. [Epub ahead of print]). To investigate the effect of various pharmacological agents was beyond the scope of the current study and unfortunately as stated in the strengths and limitations section of our paper, co-morbidities were not systematically assessed. Therefore we are not able to stratify for the factors: coronary artery disease, hypercholesterolemia or diabetes mellitus. Nevertheless, there is sufficient evidence that successful modification of lifestyle risk factors have a beneficial effect on blood pressure control irrespective of cardiovascular co-morbidities. Our cross-sectional results confirmed that the prevalence of modifiable cardiovascular risk factors is high in unselected patients with uncontrolled blood pressure thus demonstrating the potential of successful lifestyle change programmes as mentioned by Demirkol and colleagues (Oman Med J. 2012;27(6):511).

1 Demirkol S, Cakar M, Balta S, Unlu M, Akhan M, Sarlak H. The proper blood pressure may impair cardiovascular risk factors. [Swiss Med Wkly. 2013;143:w13784](#).